

CHINESE METEOROLOGICAL SATELLITES AND APPLICATIONS: CURRENT STATUS AND FUTURE PLANS

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ABSTRACT

The year 2001 marks the 30th anniversary of the foundation of National Satellite Meteorological Center (NSMC) of China. Since early 1970's China has been making her unremitting efforts on pushing her meteorological satellite program and have made remarkable achievement for building up the meteorological satellites as well as the data, information and service systems, with the purposes of meeting the needs on various aspects in China, and enhancing the capability of contribution to international satellite community. application systems.

The Chinese meteorological satellite program consists of polar-orbiting satellite series and geostationary satellite series. The Chinese meteorological satellites are named simply as Feng-Yun series, abbreviated as FY-series. The Chinese words Feng-Yun in English standards for "Winds and Clouds". We use the FY- odd number, i.e. FY-1, FY-3, etc. to name the polar orbiting satellite series, and FY-even number, i.e. FY-2, FY-4, etc. to the geostationary series. The Ministry of Aerospace of China takes the responsibility for the space segment, while China Meteorological Administration is in charge of the ground segment.

With the successful launch of the first experimental meteorological satellite FY-1A on September 7, 1988, China's meteorological satellite program entered into a fast development stage. Since then, five meteorological satellites, three polar orbiting and two geostationary, were successful launched into designed orbit up to today. Now the FY-1C polar orbit meteorological satellite with a ten-channel radiometer on board is running operationally and the geostationary meteorological satellite FY-2B with a three-channel imager can provide imaged for the coverage areas.

The developing program of meteorological satellites for the next ten years in China is quite promising. According to the plan, there are three FY-2 (FY-2C, D and FY-2E) geostationary satellites to be manufactured in the following years. The FY-3 series, the second generation of Chinese polar orbiting meteorological satellites, will be launched from 2004-2010.

China has been receiving cloud images from foreign satellites since 1960's and has gained great benefit from utilizing these satellite data since then. Meteorological satellites now have become an irreplaceable weather and ocean-observing tool. These satellites are monitoring major natural disasters and improving the efficiency of many sectors of our national economy. Therefore, meteorological satellite has been regarded as a kind of applied satellite with notable social and economic benefit among man-made satellites. It is not feasible nowadays to ignore the space-derived data in the field of meteorology, hydrology, agriculture as well as disaster monitoring in China, such a big agricultural country.

The Chinese meteorological satellite program is considered to be the contribution of China to the global environmental satellite system. China is willing to share her satellite data with the international community, and thus to make contribution to the people worldwide.

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